

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: ERIKSON, Kenneth

Group Art Unit:

Serial No.

Examiner:

Filed: HEREIN

Atty. Dkt. No: D4601-3CIP

For: ACOUSTICAL IMAGING INTERFEROMETER FOR DETECTION OF BURIED UNDERWATER OBJECTS

To: Mail Stop IDS  
Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Fm:

24222

CERTIFICATE OF MAILING 37 CFR 1.8: I certify that this correspondence is being deposited on the below date with the U.S. Postal Service with sufficient postage as FIRST CLASS MAIL addressed to: Mail Stop IDS, Commissioner of Patents, PO Box 1450, Alexandria, VA 22313-1450

Date:

[ ] Debra A. Stengel

CERTIFICATE OF MAILING 37 CFR 1.10: I certify that this correspondence is being deposited on the below date with the U.S. Postal Service with sufficient postage as EXPRESS MAIL POST OFFICE TO ADDRESSEE addressed to: Mail Stop IDS, Commissioner of Patents, PO Box 1450, Alexandria, VA 22313-1450.

Date:

07/30/2003

[x] Debra A. Stengel or [ ] Scott I. Asmus, Reg. No. 42,269

Dear Assistant Commissioner:

INFORMATION DISCLOSURE STATEMENT

Applicants submit this statement and the attached 2 sheet(s) of form PTO-1449 and 0 specimens of prior art and other information in accordance to the duty of disclosure under 37 C.F.R. §§1.56, 1.97, and 1.98, and requests consideration hereof. It is assumed the examiner is in possession of the art cited on the enclosed Form 1449 therefore, it is not included herewith. If this is not the case applicant would be happy to supply the examiner with copies of the prior art upon request.

Compliance with 37 C.F.R. §1.97: This Information Disclosure Statement is filed within three (3) months of the filing date of a National Application or before the mailing date of a first office action on the merits. No fee or certification is required.

Information Cited: The Applicants hereby make of record in the above-identified application, the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the reference. As all the references listed on attached Form PTO-1449 are in English, no commentary is required.

Remarks: A copy of each reference, together with a listing on Form PTO-1449(modified), is submitted herewith. Applicants respectfully request that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 (modified) be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application; and
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined in 37 C.F.R. §102.

Notwithstanding any statement by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,

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Attorneys/Agents for Applicant

<b>Form PTO-1449</b>				<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	
				Filing Date	HEREIN
				First Named Inventor	ERIKSON, Kenneth
				Group Art Unit	
				Examiner Name	
Sheet	1	of	2	Attorney Docket Number	D4601-3CIP

<b>U.S. PATENT DOCUMENTS</b>						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Code	Kind			
	*	6,159,149		Erikson et al	12-12-2000	
	*	6,325,757		Erikson et al	12-04-2001	
	*	5,732,706		White et al	03-31-1998	
	*	5,357,063		House et al	10-18-1994	
	*	4,922,467		Caulfield	05-01-1990	
	*	5,598,152		Scarzello et al	01-28-1997	
	*	4,991,149		Maccabee	02-05-1991	
	*	5,482,044		Lin et al	01-09-1996	
	*	5,621,345		Lee et al	04-15-1997	

<b>FOREIGN PATENT DOCUMENTS</b>							
Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Office Code	Number	Kind			T

<b>OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials	Cite No.	(Including Name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc...), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	T
	*	SABATIER, James M. et al, "Laser-Doppler Based Acoustic-to-Seismic Detection of Buried Mines", SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IV, SPIE, Vol. 3710, pp. 215-222,1999.	
	*	SIMPSON, Harry J. et al, "Synthetic array measurements of acoustical waves propagating into a water-saturated sandy bottom for a smoothed and a roughened interface", J. Acoust. Soc. Am. 107 (5), Pt.1, May 2000, pp. 2329-2337	
	*	MALMBERG, Roy Dale, "A Study of the Feasibility of Using a Buried Sonar Transducer to Echo-Locate Objects Buried in Sediment", Naval PostGraduate School, Monterey, CA, Sept. 1987.	

\* In accordance with 37 CFR 1.98(d) a copy of this reference is not provided as it was previously submitted to, or cited by, the Office in prior Application No. 10/219169 filed 8/14/2002, which is being relied on for an earlier effective filing date under 35 U.S.C. § 120.

Examiner Signature		Date Considered	
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- EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

<b>Form PTO-1449</b>				<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	
				Filing Date	HEREIN
				First Named Inventor	ERIKSON, Kenneth
				Group Art Unit	
				Examiner Name	
Sheet	2	of	2	Attorney Docket Number	D4601-3CIP

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<b>OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials	Cite No.	(Including Name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc...), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	T
	*	SSCHMIDT, Henrik et al, "Physics of 3-D scattering from rippled seabeds and buried targets in shallow water", J. Acoust. Soc. Am. 105 (3), 1999.	
	*	SMITH, Eric, "Measurement and localization of interface wave reflections from a buried target", J. Acoust. Soc. Am. 103 (5), Pt.1, May 1998, pp. 2333-2343	
	*	YOUNIS, Waheed A. et al, "Nondestructive imaging of shallow buried objects using acoustic computed tomography", J. Acoust. Soc. Am. 111 (5), Pt.1, May 2002, pp. 2117-2127	
	*	FRAZIER, Catherine H. et al, "Acoustic imaging of objects buried in soil", J. Acoust. Soc. Am. 108 (1), July 2000, pp. 147-156	
	*	POWERS, Jeffrey E. et al, "Ultrasound Phased Array Delay Lines Based on Quadrature Sampling Techniques", IEE Trans. On Sonics & Ultrasonics, Vol. SU-27(6), pp.287-294, Nov. 1980.	
	*	DONSKOY, Dimitri et al, "Nonlinear seismo-acoustic land mine detection and discrimination", J. Acoust. Soc. Am. 111 (6), June 2002, pp/ 2705-2714	

\* In accordance with 37 CFR 1.98(d) a copy of this reference is not provided as it was previously submitted to, or cited by, the Office in prior Application No. 10/219169 filed 8/14/2002, which is being relied on for an earlier effective filing date under 35 U.S.C. § 120.

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